

August 8, 2001

Mr. Robert P. Powers, Senior Vice President
Indiana Michigan Power Company
Nuclear Generation Group
500 Circle Drive
Buchanan, MI 49107

SUBJECT: DONALD C. COOK NUCLEAR PLANT, UNITS 1 AND 2 - ISSUANCE OF
AMENDMENTS RE: REACTOR PROTECTION SYSTEM ACTION
REQUIREMENTS (TAC NOS. MB2408 AND MB2409)

Dear Mr. Powers:

The U.S. Nuclear Regulatory Commission has issued the enclosed Amendment No. 254 to Facility Operating License No. DPR-58 and Amendment No. 236 to Facility Operating License No. DPR-74 for the Donald C. Cook Nuclear Plant, Units 1 and 2. The amendments consist of changes to the Technical Specifications in response to your application dated July 17, 2001.

The amendments revise Technical Specification 3.3.1.1, Table 3.3-1, Action 2a, to increase the amount of time allowed to place an inoperable power range neutron flux channel in the tripped condition from one hour to six hours.

A copy of our related safety evaluation is also enclosed. A Notice of Issuance will be included in the Commission's next biweekly *Federal Register* notice.

Sincerely,

/RA/

John F. Stang, Senior Project Manager, Section 1
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-315 and 50-316

Enclosures: 1. Amendment No. 254 to DPR-58
2. Amendment No. 236 to DPR-74
3. Safety Evaluation

cc w/encls: See next page

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PD 3-1 r/f OGC THarris
AVegel, RIII WBeckner ACRS EMarinos

Accession No. **ML012120409**

*No significant changes to SE

OFFICE	PDIII-1/PM	PDIII-1/LA	EEIB/SC	OGC	PDIII-1/SC
NAME	FLyon	THarris	EMarinos*	RHoefling	CCraig
DATE	8/1/01	8/1/01	7/31/01	8/3/01	8/6/01

OFFICIAL RECORD COPY

Donald C. Cook Nuclear Plant, Units 1 and 2

cc:

Regional Administrator, Region III
U.S. Nuclear Regulatory Commission
801 Warrenville Road
Lisle, IL 60532-4351

Attorney General
Department of Attorney General
525 West Ottawa Street
Lansing, MI 48913

Township Supervisor
Lake Township Hall
P.O. Box 818
Bridgman, MI 49106

U.S. Nuclear Regulatory Commission
Resident Inspector's Office
7700 Red Arrow Highway
Stevensville, MI 49127

David W. Jenkins, Esquire
Indiana Michigan Power Company
Nuclear Generation Group
One Cook Place
Bridgman, MI 49106

Mayor, City of Bridgman
P.O. Box 366
Bridgman, MI 49106

Special Assistant to the Governor
Room 1 - State Capitol
Lansing, MI 48909

Drinking Water and Radiological
Protection Division
Michigan Department of
Environmental Quality
3423 N. Martin Luther King Jr Blvd
P.O. Box 30630, CPH Mailroom
Lansing, MI 48909-8130

Ronald Gaston
Director, Regulatory Affairs
Indiana Michigan Power Company
Nuclear Generation Group
One Cook Place
Bridgman, MI 49106

David A. Lochbaum
Union of Concerned Scientists
1616 P Street NW, Suite 310
Washington, DC 20036-1495

A. Christopher Bakken, Site Vice President
Indiana Michigan Power Company
Nuclear Generation Group
One Cook Place
Bridgman, MI 49106

Michael W. Rencheck
Vice President, Nuclear Engineering
Indiana Michigan Power Company
Nuclear Generation Group
500 Circle Drive
Buchanan, MI 49107

INDIANA MICHIGAN POWER COMPANY

DOCKET NO. 50-315

DONALD C. COOK NUCLEAR PLANT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 254
License No. DPR-58

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Indiana Michigan Power Company (the licensee) dated July 17, 2001, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-58 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 254, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented within 45 days.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Claudia M. Craig, Chief, Section 1
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: August 8, 2001

ATTACHMENT TO LICENSE AMENDMENT NO. 254

TO FACILITY OPERATING LICENSE NO. DPR-58

DOCKET NO. 50-315

Replace the following page of the Appendix A Technical Specifications with the attached revised page. The revised page is identified by amendment number and contains a marginal line indicating the area of change.

REMOVE

3/4 3-6

INSERT

3/4 3-6

INDIANA MICHIGAN POWER COMPANY

DOCKET NO. 50-316

DONALD C. COOK NUCLEAR PLANT, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 236

License No. DPR-74

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Indiana Michigan Power Company (the licensee) dated July 17, 2001, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-74 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 236, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented within 45 days.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Claudia M. Craig, Chief, Section 1
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: August 8, 2001

ATTACHMENT TO LICENSE AMENDMENT NO. 236

FACILITY OPERATING LICENSE NO. DPR-74

DOCKET NO. 50-316

Replace the following page of the Appendix A Technical Specifications with the attached revised page. The revised page is identified by amendment number and contains a marginal line indicating the area of change.

REMOVE

3/4 3-5

INSERT

3/4 3-5

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 254 TO FACILITY OPERATING LICENSE NO. DPR-58
AND AMENDMENT NO. 236 TO FACILITY OPERATING LICENSE NO. DPR-74
INDIANA MICHIGAN POWER COMPANY
DONALD C. COOK NUCLEAR PLANT, UNITS 1 AND 2
DOCKET NOS. 50-315 AND 50-316

1.0 INTRODUCTION

By application dated July 17, 2001, the Indiana Michigan Power Company (I&M, the licensee) requested amendments to the Technical Specifications (TSs) for the Donald C. Cook Nuclear Plant, Units 1 and 2. The proposed amendments would revise Technical Specification 3.3.1.1, Table 3.3-1, Action 2a, to increase the amount of time allowed to place an inoperable power range neutron flux channel in the tripped condition from one hour to six hours.

2.0 BACKGROUND

In the early 1980's, licensees and the Nuclear Regulatory Commission (NRC) focused on the issue of the effects for surveillance testing and maintenance requirements upon plant operation. It was found that shorter allowed outage times were partly responsible for inadvertent trips and challenges to safety systems. In response to this concern, the Westinghouse Owner's Group (WOG) initiated a program to evaluate the concern and published the results and proposed actions in WCAP-10271. The NRC reviewed the WCAP and issued a safety evaluation (SE) dated February 21, 1985, titled, "Acceptance for Referencing of Licensing Topical Report WCAP-10271, 'Evaluation of Surveillance Frequencies and Out of Service Times for the Reactor Protection Instrumentation Systems'".

3.0 EVALUATION

TS 3/4.3.1 provides requirements for reactor trip system instrumentation. This TS includes the power range neutron flux trip system requirements and action requirements. The power range neutron flux high trip function ensures that protection is provided against a positive reactivity excursion leading to departure from nucleate boiling during power operations. TS 3.3.1.1, Table 3.3-1, requires a power range neutron flux channel to be placed in the tripped condition if a channel is out of service to ensure the reactor trip function logic is maintained. The reactor trip function logic would be one-out-of-three when the channel is placed in the tripped condition, which is more limiting than the two-out-of-four design. With the number of operable power range neutron flux channels one less than the total number of channels, Action 2a allows power operation to proceed provided the inoperable channel is placed in the tripped condition within one hour.

The problem exists with the quarterly power range neutron flux channel calibration surveillance test, defined by the TS. The manner in which the testing is performed requires the detector to be disconnected from the instrumentation. This makes the channel inoperable. Since the channel calibration takes longer than one hour to perform, the channel is placed in the tripped condition. To complete the test, the channel must be taken out of the tripped condition prior to reconnecting the detector input. The channel remains inoperable because it is disconnected; thus, Action 2a cannot be met.

The proposed change revises TS 3.3.1.1, Table 3.3-1, Action 2a to allow six (6) hours instead of one (1) hour to place the inoperable power range neutron flux channel in the tripped condition if the number of operable channels is one less than the total number of channels.

The proposed change to increase the time allowed to place an inoperable power range neutron flux channel in a tripped condition from one (1) hour to six (6) hours is consistent with WCAP-10271. In the SE for WCAP-10271, the NRC concluded that an acceptable basis has been achieved to allow approval of plant-specific TS change requests to increase the time which an inoperable reactor trip system channel may be maintained in an untripped condition from one (1) hour to six (6) hours.

In the SE report for WCAP-10271, the NRC recognized that the proposed change results in a benefit to the plant. This benefit is realized by reducing the potential for inadvertent reactor trips and subsequent plant transients during testing. Additionally, the proposed change is consistent with NUREG-1431, Standard Technical Specifications for Westinghouse Plants.

The proposed change conforms to WCAP-10271 as approved by the NRC per letter dated February 21, 1985, and is also consistent with NUREG-1431. The proposed change is acceptable.

4.0 EXIGENT CIRCUMSTANCES

The Commission's regulations at 10 CFR 50.91 contain provisions for issuance of amendments where the Commission finds that exigent circumstances exist, in that a licensee and the Commission must act quickly and that time does not permit the Commission to publish a *Federal Register* notice allowing 30 days for prior public comment before issuance of an amendment. The exigency exists in this case in that the proposed amendment is needed because (1) the required surveillance test procedure for the quarterly power range neutron flux channel calibration cannot be performed in a manner that is consistent with meeting the current one-hour completion requirement of TS 3.3.1.1, Table 3.3-1, Action 2a; and (2) the time before the next required performance of the procedure does not permit the Commission to publish a notice allowing 30 days for prior public comment.

In its application, the licensee explained why it could not have foreseen the need for this amendment. The proposed TS change is being requested on an exigent basis because I&M recently discovered that the surveillance test procedure for the quarterly power range neutron flux channel calibration, required by TS 4.3.1.1.1, Table 4.3-1, was not being performed in accordance with TS 3.3.1.1, Table 3.3-1, Action 2a. I&M has determined this to be reportable under 10 CFR 50.73(a)(2)(i)(B). I&M states that the problem exists with the quarterly power range neutron flux channel calibration surveillance, defined by TS 1.9. The manner in which the testing is performed requires the detector to be disconnected from the instrumentation.

This makes the channel inoperable. Since the channel calibration takes longer than one hour to perform, the channel is placed in the tripped condition. To complete the test, the channel must be taken out of the tripped condition prior to reconnecting the detector input. The channel remains inoperable because it is disconnected; thus, Action 2a can not be met. I&M performed a review of the surveillance test procedure and concluded that the test cannot be performed in a manner that is consistent with meeting the current one-hour completion requirement of Action 2a. In order to restore compliance with the TS, the one-hour completion requirement should be increased to a time that would allow completion of the required testing. The next surveillance is due August 12, 2001, which includes the 25 percent extension allowed by TS 4.0.2. I&M could not have avoided the exigency due to the short duration between when the problem was discovered and the date when the next surveillance is due.

Accordingly, the Commission has determined that exigent circumstances exist pursuant to 10 CFR 50.91(a)(6), the submittal of information was timely, and the licensee did not create the exigency.

5.0 FINAL NO SIGNIFICANT HAZARDS CONSIDERATIONS DETERMINATION

The Commission's regulations in 10 CFR 50.92(c) state that the Commission may make a final determination that a license amendment involves no significant hazards consideration if operation of the facility in accordance with the proposed amendment would not (1) involve a significant increase in the probability or consequences of an accident previously evaluated, (2) create the possibility of a new or different kind of accident from any accident previously evaluated, or (3) result in a significant reduction in the margin of safety. The NRC staff has made a final determination that no significant hazards consideration is involved for the proposed amendment and that the amendment should be issued as allowed by the criteria contained in 10 CFR 50.91. The NRC staff's final determination is presented below.

1. The change does not involve a significant increase in the probability of occurrence or consequences of an accident previously evaluated.

The change involves an increase in the amount of time allowed prior to placing an inoperable reactor protection channel in a tripped condition. By placing a channel in a tripped condition when the channel is inoperable, it places the reactor protection system from two-out-of-four reactor trip logic to one-out-of-three reactor trip logic. This places the reactor closer to a tripped condition if a spurious signal should occur on one of the other channels. By not placing the reactor closer to an inadvertent reactor trip, the probability of a reactor trip is not significantly increased. One channel being inoperable is not a precursor to any accident and thus does not significantly increase the probability of occurrence of any accident previously evaluated. Due to the redundancy in the reactor trip logic, the channel remaining in an untripped condition still allows a two-out-of-three reactor trip logic. This ensures that even if another channel failed, the reactor trip, if required, would still function. Thus, the consequences of an accident are not significantly increased. Thus, the proposed change does not involve a significant increase in the probability of occurrence or consequences of an accident previously evaluated.

2. The change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

The proposed changes do not involve hardware modifications or provide functional changes to the reactor protection system. The way in which the reactor protection is taken to a tripped condition remains the same, only the time-frame within which it is required to be placed in the tripped condition is extended. Allowing additional time before placing an inoperable channel in a tripped condition does not create the possibility of a new or different kind of accident.

3. The change does not involve a significant reduction in a margin of safety.

The margin of safety is not significantly reduced by allowing the proposed six hours prior to requiring an inoperable channel to be placed in a tripped condition. The proposed change does not alter the function of the reactor trip logic. The two-out-of-three reactor trip logic that will exist without the channel in a tripped condition continues to ensure that with a single failure of a second channel, the reactor trip function will still occur. Thus, the accident analyses remain protected. Therefore, the proposed change does not involve a significant reduction in a margin of safety.

6.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Michigan State official was notified of the proposed issuance of the amendments. The State official had no comments.

7.0 ENVIRONMENTAL CONSIDERATION

These amendments change the requirements with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has made a final finding that the amendments involve no significant hazards consideration. Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

8.0 CONCLUSION

The staff has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

9.0 REFERENCES

1. Letter dated February 21, 1985, from C. O. Thomas (NRC) to J. J. Sheppard, Chairman, Westinghouse Owners Group, Subject: Acceptance For Referencing of Licensing Topical Report WCAP-10271, "Evaluation of Surveillance Frequencies and Out of Service Times For the Reactor Protection Systems" - NUDOCS
Accession Number 8503010427.
2. NUREG-1431, Standardized Technical Specifications Westinghouse Plants,
<http://www.nrc.gov/NRR/sts/wog-specs.pdf>.

Principal Contributor: D. Spaulding

Date: August 8, 2001